

UAS MODELING OF CORRAL BLUFFS, CO - PALEONTOLOGICAL SURVEY

BACKGROUND

Corral Bluffs is located at the eastern edge of Colorado Springs, Colorado. Its scenic 400 ft. high bluffs contain rich archaeological and paleontological resources, and provides an important wildlife habitat. The area also preserves numerous paleontological fossils and marks the Cretaceous–Paleogene (K/Pg) boundary, a geologically significant mass extinction event that marks a decline of biodiversity.



The BirdsEyeView FireFly6 vertical take-off and landing fixed-wing UAS platform was utilized with a Sony RX1RII camera to reconstruct a photogrammetric model.

UAS DATASET

Textured 3D Surface Model with Surveyed Fossil Locations (*Below*)
3294 Camera Stations, Flying Altitude 189 m
Ground Resolution: 2.41 cm
Total area: 4 km²

UAS PROJECT INFORMATION

In September 2018 the U.S. Geological Survey and the Denver Museum of Nature and Science set out to collect UAS imagery to build a photogrammetric model of the Corral Bluffs study area. The model was used to extract high resolution elevation data of paleontological fossil locations. Accurate elevation data is important component to back dating fossils based on known stratigraphy. The site is a significant source of data to help understand the planets rebound from a mass extinction event.



Close Range 3D Model of Petrified Tree Stump (Forward View) Model by NPS



Close Range 3D Model of Petrified Tree Stump (Rear View) Model by NPS



Photo Image of Fossilized Turtle Image by NPS



UAS derived textured surface model with estimated fossil locations